

## **Appendix. Identification of Amended Material**

### **IN THE SPECIFICATION**

**The following paragraph replaces the paragraph on page 6, line 12:**

In particular, a large portion of the thermally created shear stress is spread throughout the length of the laminate 28, rather than being concentrated within the individual BGA connections 30. The flexible nature of the laminate 28 is further enhanced by selectively placing critical BGA connections 30 in staggered or off-set or alternating positions on the top and bottom surfaces of the laminate 28. Note that not all BGA connections 30 need to be staggered to obtain an optimal solder ball fatigue life. For ceramic components, the critical BGA connections 30 are located at the far corners, or the far DNP (distance to neutral point), and may be staggered at that location. Alternatively, for organic components, the critical BGA connections 30 are located under the die region of the laminate 28, and may be staggered at that location. The BGA connections 30 are off-set by approximately the thickness of the laminate 28. This provides the laminate 28 with additional flexibility in the Z direction, as illustrated in Figs. 3A and 3B. In particular, Fig. 3A shows the module 20 during bending, wherein the chip package 22 and the card 24 deform in the Z direction, thereby applying stresses to the interconnection 26, as illustrated. However, due to the flexible nature of the laminate 28, the interconnection 26 can rotate, flex, or bend upwards and downwards as needed, in response to stresses in the X, Y and Z directions created by the CTE mismatch between the chip package 22 and the circuit card 24, without transmitting the stresses into the critical BGA connections 30, as further illustrated in Fig. 3B.